

**Cañada College**  
**Official Course Outline**

1. **COURSE ID:** MATH 111    **TITLE:** Elementary Algebra I  
**Semester Units/Hours:** 3.0 units; a minimum of 48.0 lecture hours/semester  
**Method of Grading:** Letter Grade Only  
**Prerequisite:** 3 units of MATH 811, or appropriate score on District math placement test and other measures as appropriate.  
**Recommended Preparation:**  
Eligibility for READ 836 and ENGL 836; or ENGL 847 or ESL 400.
2. **COURSE DESIGNATION:**  
**Non-Degree Credit**  
**Basic Skills**  
**Transfer credit:** none
3. **COURSE DESCRIPTIONS:**  
**Catalog Description:**  
This course is equivalent to the first half of MATH 110. Topics include the real number system, linear equations, linear inequalities, graphing, and systems of equations. Students who complete this course with a C or better are advised to enroll in MATH 112.  
**Schedule of Classes Description**  
Equivalent to the first half of MATH 110. Provides an introduction to elementary algebra covering real numbers, equations, and graphing.
4. **STUDENT LEARNING OUTCOME(S) (SLO'S):**  
Upon successful completion of this course, a student will meet the following outcomes:
  - A. 1. Solve linear algebraic equations and inequalities that model a given application. a. Translate a statement into an appropriate one-variable linear equation or inequality. b. Use appropriate strategies to find the solutions. c. Model and solve word problems whose solutions require formulating one variable linear equations.
  - B. 2. Construct and analyze a linear graph in a Cartesian coordinate system. a. Use different methods to graph a two-variable linear equation. b. Interpret the graph.
5. **SPECIFIC INSTRUCTIONAL OBJECTIVES:**  
Upon successful completion of this course, a student will be able to:
  - A. Use a number line to order real numbers.
  - B. Find the absolute value of real numbers.
  - C. Manipulate and perform basic operations on real numbers, including fractions and decimals.
  - D. Define and use exponents and the order of operations.
  - E. Evaluate algebraic expressions, given replacement values for variables.
  - F. Identify and use the properties of real numbers.
  - G. Simplify algebraic expressions.
  - H. Solve linear equations.
    - I. Translate word phrases and sentences into algebraic expressions and equations.
    - J. Solve word problems involving linear equations.
  - K. Solve linear inequalities.
  - L. Graph solutions sets and use interval notation.
  - M. Read and interpret bar and line graphs.
  - N. Graph linear equations.
  - O. Identify intercepts of a linear equation.
  - P. Solve systems of linear equations.
  - Q. Solve word problems involving systems of linear equations.
6. **COURSE CONTENT:**  
**Lecture Content:**
  1. Real numbers and their properties
    - Symbols and sets of numbers
    - Operations of real numbers

- Properties of real numbers
- 2. Linear equations
  - Simplifying expressions
  - Solving equations
  - Applications of equations
- 3. Graphs
  - Reading graphs
  - The rectangular coordinate system
  - Graphing linear equations
- 4. Systems of linear equations
  - Solve systems by graphing
  - Solve systems by addition and substitution methods
  - Applications to systems

**Lab Content:**

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**TBA Hours Content:**

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**7. REPRESENTATIVE METHODS OF INSTRUCTION:**

Typical methods of instruction may include:

**8. REPRESENTATIVE ASSIGNMENTS**

Representative assignments in this course may include, but are not limited to the following:

**Writing Assignments:**

Explain the difference between an expression and an equation.

**Reading Assignments:**

One to three sections of the textbook per week.

**Other Outside Assignments:**

None.

**To be Arranged Assignments (if applicable):**

Not applicable.

**9. REPRESENTATIVE METHODS OF EVALUATION**

Representative methods of evaluation may include:

- A. Exams/Tests
- B. Home Work
- C. Quizzes
- D. Other special assignments such as journals, projects, and worksheets.

**10. REPRESENTATIVE TEXT(S):**

Possible textbooks include:

- A. Lehmann, Jay. *Elementary Algebra: Graphs and Authentic Applications*, ed. USA: Prentice Hall, 2008
- B. Martin-Gay, Elayn. *Beginning and Intermediate Algebra*, ed. Upper Saddle River, New Jersey: Prentice Hall, 2008

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**Course Originator:** Denise Hum